

**ENERGY SENSING ORGANIC LIGHT EMITTING DIODE DISPLAY**

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**ABSTRACT OF THE DISCLOSURE**

A display that includes energy sensors within the display itself is disclosed. An Organic Light Emitting Diode (OLED) can be made to operate both as a light emitter and as an energy detector. When forward biased with an appropriate driving signal, the OLED emits light via electroluminescence, which can be used to make a portion of an image on the display. In another mode, the OLED can detect energy by converting incoming photons or energy into an electrical signal by the photoelectric effect. By operating OLEDs in the display in both emissive and sensing modes, energy that shines on the display, such as from an outside source can be detected at the same time an image is shown. Additionally, a display including OLEDs can detect light energy generated by the display itself.

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